

# MATERIAL SAFETY DATA SHEET



Conforms to 93/112/EC and ISO 11014-1

## 1. Chemical Product and Company Identification

**Product Name:** Ammonium Persulfate

**Product Number:** EC-504

**Chemical Names/**

Ammonium Peroxydisulfate; Peroxydisulfuric Acid;

**Description:**

Diammonium Salt; Diammonium peroxydisulfate.

**Manufacturer**

National Diagnostics  
305 Patton Drive  
Atlanta, GA 30336

**Telephone Numbers**

(800) 526-3867  
(404) 699-2121

**Emergency Numbers**

**Chemtrec**

**(800) 424-9300 (U.S. & Canada)**

**01-703-527-3887 (outside U.S. & Canada)**

## 2. Composition/Information on Ingredients

Component	% Comp.	CAS #	EINECS #	TLV (Units)
Ammonium Persulfate	99	7727-54-0	231-786-5	5 mg/m <sup>3</sup> (TWA)

## EEC LABEL SYMBOL AND CLASSIFICATION



**R: 8-22-36/37/38-4**

**Contact with combustible material may cause fire. Harmful if swallowed. Irritating to eyes, respiratory system and skin. May cause sensitization by inhalation and skin contact.**

**S: 22-24-26-37**

**Do not breathe dust. Avoid contact with skin. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable gloves.**

## 3. Hazards Identification

### Appearance and Odor

White crystals.

### EMERGENCY OVERVIEW - IMMEDIATE HAZARD

**DANGER! STRONG OXIDIZER. CONTACT WITH OTHER MATERIAL MAY CAUSE FIRE.**

HARMFUL IF SWALLOWED OR INHALED. MAY CAUSE BURNS TO SKIN AND EYES.  
MAY CAUSE ALLERGIC SKIN OR RESPIRATORY REACTION.

**EMERGENCY OVERVIEW - CHRONIC HAZARD WARNING:**

PROLONGED SKIN CONTACT MAY CAUSE AN ALLERGIC REACTION WITH  
DERMATITIS.

**Potential Health Effects**

**Inhalation**

May irritate the mucous membranes. May cause lung edema. Any exposure may cause an allergic reaction. Asthma-like symptoms and life-threatening shock may result.

**Ingestion**

Corrosive. Harmful if swallowed.

**Skin**

Corrosive. May cause skin burns. May cause skin sensitization, an allergic reaction, which becomes evident upon re-exposure to this material.

**Eyes**

May cause severe irritation and pain.

**Signs and Symptoms of Overexposure**

**Inhalation**

Sore throat, shortness of breath, inflammation of nasal passages, coughing, and wheezing. Allergic reaction may cause asthma-like symptoms and life-threatening shock.

**Ingestion**

Abdominal pain, nausea, and vomiting.

**Skin**

Pain, redness, dermatitis.

**Eyes**

Pain, redness, tearing.

**Carcinogenicity**

Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.

**Mutagenicity**

No information found.

**Reproductive Toxicity**

No information found.

**Teratogenic Effects**

No information found.

**Routes of Entry**

No information found.

**Target Organ Statement**

Persons with impaired respiratory function may be more susceptible to the effects of this substance.

**4. First Aid Measures**

**Inhalation**

Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.

**Ingestion**

Do not induce vomiting. If swallowed and the person is conscious, immediately give large amounts of water. Get medical attention.

**Skin**

Immediately flush skin with plenty of soap and water for at least 15 minutes while removing

contaminated clothing and shoes. Get medical attention. Wash clothing before reuse. Thoroughly clean shoes before reuse.

### Eyes

Immediately flush eyes with plenty of water for at least fifteen minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.

## 5. Fire Fighting Measures

Flash Point	N.D.	Flammable Limits	N.D.
Flash Point Method	N.D.	Autoignition temperature	N.D.

### Extinguishing media

Dry powder, foam, carbon dioxide. Do not use water (Contact with water releases oxygen which may intensify combustion in an existing fire).

### Protective Equipment

In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

### Hazardous Combustion Products

Nitrogen oxides, sulfur oxides, and sulfuric acid.

### Unusual Fire and Explosion Hazards

Not combustible, but substance is a strong oxidizer and its heat of reaction with reducing agents or combustibles may cause ignition. Explosion hazard when mixed with finely powdered organic matter, metal powder, or reducing agents.

NFPA Codes: Health 3 Flammability 0 Reactivity 1

## 6. Accidental Release Measures

### Steps to be taken in case material is released or spilled

Remove all sources of ignition. Ventilate area. Clean up spills in a manner that does not disperse dust into the air. Use non-sparking tools and equipment. Wear appropriate personal protective equipment as specified in section 8.

### Waste Disposal Method

Disposal must be made in accordance with applicable federal, state, and local regulations.

### Personal Precautions

Wear appropriate protective equipment as specified in section 8.

## 7. Handling and Storage

### Handling

Avoid contact and inhalation. Do not get in eyes, on skin, on clothing. Wash thoroughly after handling.

### Storage

Keep in a tightly closed container, stored in a cooled, dry, ventilated area away from sources of heat or ignition. Protect from physical damage. Isolate from incompatible materials (section 10). Avoid storage on wood floors.

### Storage Temperature

Room Temperature

### Disposal

Dilute with plenty of water and dispose via treatment system in accordance with appropriate local and governmental regulations.

## 8. Exposure Controls/Personal Protection

### Airborne Exposure Limits

Component: Ammonium Persulfate

ACGIH Threshold Limit Value (TLV): 5 mg/m<sup>3</sup> (TWA)

OSHA Permissible Exposure Limit (PEL):

### Engineering Controls

A system of local and/or general exhaust is recommended to keep employee exposures below the Airborn Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source.

### Respiratory Protection

If exposure limits are exceeded, wear a full-face respirator with organic vapor cartridge and high efficiency dust mist filter. Beyond fifty times exposure limits or when exposure levels are not known, wear a full-face piece positive pressure respirator.

### Eye Protection

Use chemical safety goggles and/or a full face shield where contact is possible. Maintain eye wash fountain and quick-drench facilities in work area.

### Skin Protection

Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

### Other Control Measures

N.A.

## 9. Physical Properties

**Boiling point** N.A.

**Evaporation Rate** No Data

**Melting point** 120 C (248 F)

**Solubility in water** 80 g/100 ml @ 25 C

**Vapor pressure (mmHg)** No Data

**pH** N.A.

**Vapor density (Air = 1)** No Data  
**% Volatile by volume** 0

**Specific gravity (H<sub>2</sub>O = 1)** 1.98 @ 20C

## 10. Stability and Reactivity

### Stability

Stable under ordinary conditions of use and storage. Stability decreases in the presence of moisture.

### Conditions to Avoid

Moisture, combustible materials, and incompatibles.

## Hazardous Decomposition Products

Decomposed by moisture to form oxygen and ozone. Burning may produce nitrogen oxides, sulfur oxides, and sulfuric acid.

## Hazardous Polymerization

Will not occur

## Incompatibles

Ammonium Persulfate:

Reducing agents, organic material, sodium peroxide, water and powdered metals especially aluminum.

## 11. Toxicological Information

### Product LD50 Values

Ammonium Persulfate	Oral Rat LD50 (mg/kg):	696
Ammonium Persulfate	Dermal Rabbit LD50 (mg/kg):	> 10 g/kg

### Component Cancer List Status

	NTP Carcinogen		IARC Category
	Known	Anticipated	
Ammonium Persulfate	No	No	None

## 12. Ecological Information

### Ammonium Persulfate

Biodegradability does not apply to inorganic substances. No other fate data available. Bluegill sunfish 96-hr LC50 = 103 mg/l. Rainbow trout 96-hr LC50 = 76.3 mg/l. Daphnia 48-hr LC50 = 120 mg/l. Grass shrimp 96-hr LC50 = 391 mg/l.

## 13. Disposal Considerations

Dilute with plenty of water and dispose via treatment system in accordance with appropriate local and governmental regulations.

## 14. Transport Information

### D.O.T.

Proper Shipping Name: Ammonium Persulfate

Hazard Class: 5.1

UN Number: 1444

Packing Group: III

### I.A.T.A.

Proper Shipping Name: Ammonium Persulfate

Hazard Class: 5.1

UN Number: 1444

Packing Group: III

### I.M.O.

Proper Shipping Name: Ammonium Persulfate

Hazard Class: 5.1  
UN Number: 1444  
Packing Group: III

## 15. Regulatory Information

### United States

#### TSCA Regulatory Statement

All intentional ingredients are listed on the TSCA Inventory.

#### SARA 311/312 Hazard Categories

Component	Fire	Pressure	Reactivity	Acute	Chronic
Ammonium Persulfate	No	No	Yes	Yes	Yes

### Europe

#### EEC Regulatory

All intentional ingredients are listed on the European EINECS Inventory.

#### EEC LABEL SYMBOL AND CLASSIFICATION



HARMFUL

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## 16. Other Information

**NFPA Codes: Health 3 Flammability 0 Reactivity 1**

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